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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/775,089	02/11/2004	Suk-Kyun Hur	46316	1189

1609 7590 10/03/2007  
ROYLANCE, ABRAMS, BERDO & GOODMAN, L.L.P.  
1300 19TH STREET, N.W.  
SUITE 600  
WASHINGTON,, DC 20036

EXAMINER
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LE, LANA N

ART UNIT	PAPER NUMBER
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2618

MAIL DATE	DELIVERY MODE
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10/03/2007

PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b> 10/775,089	<b>Applicant(s)</b> HUR, SUK-KYUN	
	<b>Examiner</b> Lana N. Le	<b>Art Unit</b> 2618	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 05 September 2007.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-5, 11, 12, 17 and 18 is/are pending in the application.  
     4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1, 11, 12, 17, 18, 29, 30 and 35 is/are rejected.
- 7) ☒ Claim(s) 2-5, 13-16, 19-23 and 31-34 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
     Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
     Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
     a) ☐ All    b) ☐ Some    \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)   | 5) <input type="checkbox"/> Notice of Informal Patent Application                       |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date <u>90507</u> . | 6) <input type="checkbox"/> Other: _____  |

## DETAILED ACTION

### ***Claim Rejections - 35 USC § 102***

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claim 1 is rejected under 35 U.S.C. 102(b) as being anticipated by Do et al (US 2001/0,040,485) (hereinafter Do).

Regarding claim 1, Do disclose in a wireless communication device (fig. 10) having at least two amplifiers for amplifying transmit power for a mobile station, a method of controlling the amplifiers, comprising the steps of:

deciding (via controller 19) an amplifier to be enabled or disabled between the at least two amplifiers (16,18,20,24) in a base station (1); and enabling or disabling the decided amplifier according to an input command message (30) (fig. 10; paras. 61-62).

### ***Claim Rejections - 35 USC § 103***

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

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4. Claim 18 is rejected under 35 U.S.C. 103(a) as being unpatentable over Do (US 2001/0,040,485) in view of Steel (US 6,782,244) (hereinafter Steel).

Regarding claim 18, Do disclose in a wireless communication device (fig. 10) having at least two amplifiers (16, 18, 20, 24; fig. 10) for amplifying transmit power for a mobile station, an apparatus for controlling the amplifiers, comprising: a sleep mode operator (system operator) for deciding whether to enable or disable the at least two amplifiers based on measured power (para. 63; operator decides to turn off one of amplifier based on period of inactivity). Do do not disclose a channel combiner for measuring total power for each sector of the wireless communication device. In related art, Steel discloses a channel combiner (128; col 8, lines 12-45; col 5, lines 37-48) for measuring total power for each sector of the wireless communication device (see fig. 3). It would have been obvious to one of ordinary skill in the art at the time the invention was made to have a channel combiner for measuring total power in order to determine whether power used is low, i.e. during periods of inactivity.

5. Claim 11 is rejected under 35 U.S.C. 103(a) as being unpatentable over Do in view of Gard et al (US 4,902,981) (hereinafter Gard).

Regarding claim 11, Do disclose the method of claim 1, wherein Do do not disclose the sleep mode operator receives a time period set by the operator and decides an amplifier to be enabled or disabled according to input from the operator for the time period. In the same field of endeavor, Gard disclose setting a time period by the operator (operator set duration code value; col 7, line 52 – col 8, line 2), and deciding for the time period, the amplifier to be enabled or disabled according to an

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input from the operator (enabling amplifier 10 by removing short from inputs to operating amplifier 10, col 7, line 52 – col 8, line 2). It would have been obvious to one of ordinary skill in the art at the time the invention was made to allow the user to set the time period to enable or disable the amplifier in order to compensate for DC error that occurred as suggested by Gard (col 2, lines 5-10).

6. Claim 29 is rejected under 35 U.S.C. 103(a) as being unpatentable over Do in view of Steel in view of Gard et al (US 4,902,981) (hereinafter Gard).

Regarding claim 29, Do and Steel disclose the apparatus of claim 18, wherein Do and Steel do not disclose the sleep mode operator receives a time period set by the operator and decides an amplifier to be enabled or disabled according to input from the operator for the time period. In the same field of endeavor, Gard disclose the sleep mode operator receives a time period set by the operator setting a time period by the operator (operator set duration code value; col 7, line 52 – col 8, line 2), and deciding for the time period, the amplifier to be enabled or disabled according to an input from the operator (enabling amplifier 10 by removing short from inputs to operating amplifier 10, col 7, line 52 – col 8, line 2). It would have been obvious to one of ordinary skill in the art at the time the invention was made to allow the user to set the time period to enable or disable the amplifier in order to compensate for DC error that occurred as suggested by Gard (col 2, lines 5-10).

7. Claim 17 is rejected under 35 U.S.C. 103(a) as being unpatentable over Do in view of Gard and further in view of Loke et al (US 6,615,028).

Regarding claim 17, Do and Gard disclose the method of claim 11, wherein they do not disclose the step of deciding an amplifier to be enabled or disabled comprises: determining automatically an amplifier to be enabled or disabled by calculating the number of required amplifiers according to required power and amplifier characteristics. Loke et al disclose a step of deciding an amplifier to be enabled or disabled comprises determining automatically an amplifier to be enabled or disabled by calculating the number of required amplifiers according to required power and amplifier characteristics (col 2, lines 36-59; col 3, lines 3-23; col 10, line 43 – col 11, line 35). It would have been obvious to one of ordinary skill in the art at the time the invention was made to determine automatically an amplifier to be enabled or disabled based on required power and amplifier characteristics in order to increase the efficiency of the amplifier module as suggested by Loke et al.

8. Claim 35 is rejected under 35 U.S.C. 103(a) as being unpatentable over Do in view of Steel and Gard and further in view of Loke et al (US 6,615,028).

Regarding claim 35, Do, Steel and Gard disclose the apparatus of claim 29, wherein they do not disclose the step of deciding an amplifier to be enabled or disabled comprises: determining automatically an amplifier to be enabled or disabled by calculating the number of required amplifiers according to required power and amplifier characteristics. Loke et al disclose a step of deciding an amplifier to be enabled or disabled comprises determining automatically an amplifier to be enabled or disabled by calculating the number of required amplifiers according to required power and amplifier characteristics (col 2, lines 36-59; col 3, lines 3-23; col 10, line 43 – col 11, line 35). It

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would have been obvious to one of ordinary skill in the art at the time the invention was made to determine automatically an amplifier to be enabled or disabled based on required power and amplifier characteristics in order to increase the efficiency of the amplifier module as suggested by Loke et al.

9. Claim 12 is rejected under 35 U.S.C. 103(a) as being unpatentable Do in view of Gard in view of Harris et al (US 6,055,418).

Regarding claim 12, Do and Gard disclose the method of claim 11, wherein they do not disclose the sleep mode operator decides the amplifier to be enabled or disabled according to the ID of an amplifier input by the operator. In related art, Harris et al disclose changing the operational status of an amplifier based on the identified module address field of the power amplifier (col 4, lines 53-61). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to use an ID of an amplifier in Steel in order to identify and point out which amplifier is to be enabled at the time as suggested by Harris et al.

10. Claim 30 is rejected under 35 U.S.C. 103(a) as being unpatentable over Do in view of Steel and Gard and further in view of Harris et al (US 6,055,418).

Regarding claim 30, Do, Steel, and Gard disclose the apparatus of claim 29, wherein they do not disclose the sleep mode operator decides the amplifier to be enabled or disabled according to the ID of an amplifier input by the operator. In related art, Harris et al disclose changing the operational status of an amplifier based on the identified module address field of the power amplifier (col 4, lines 53-61). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was

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made to use an ID of an amplifier in Steel in order to identify and point out which amplifier is to be enabled at the time as suggested by Harris et al.

***Allowable Subject Matter***

11. Claims 2-5, 13-16, 19-23, and 31-34 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Regarding claim 19, Steel disclose the apparatus of claim 18, wherein Steel and the cited prior art fail to disclose the sleep mode operator comprises:

a storage for storing parameters needed for control of the amplifiers and the number of current operating amplifiers; a calculator for calculating the number of required amplifiers based on required power, the number of the operating amplifiers, and a predetermined compensation parameter; and

a controller for controlling the at least two amplifiers to be in the enable or disable states according to the number of required amplifiers according to a predetermined algorithm.

Regarding claims 2 and 20, Steel disclose the method and apparatus of claims 1 and 18 respectively, wherein Gard disclose the step of deciding an amplifier to be enabled or disabled comprises: deciding the amplifier to be enabled or disabled according to an input from the operator.

However, Steel, Gard, and the cited prior art fail to disclose further:



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determining whether the decision of the amplifier to be enabled or disabled according to the input from the operator is right or wrong.

Regarding claim 13, Steel, Chen, and Harris disclose the method of claim 12, wherein Steel, Gard, Harris and the cited prior art fail to disclose further: determining whether the decision of the amplifier to be enabled or disabled is right or wrong.

Regarding claim 31, Steel, Chen, and Harris disclose the apparatus of claim 30, wherein Steel, Chen, Harris and the cited prior art do not disclose the sleep mode operator determines whether the decision of the amplifier to be enabled or disabled is right or wrong.

### ***Response to Arguments***

12. Applicant's arguments with respect to claims 1-5, 11-23, and 29-35 have been considered but are moot in view of the new ground(s) of rejection.

### ***Conclusion***

13. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Lana N. Le whose telephone number is (571) 272-7891. The examiner can normally be reached on M-F 9:30-18:30.


If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Edward F. Urban can be reached on (571) 272-7899. The fax phone

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number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

LNL  
/lnl/

  
9-28-07

LANA LE  
PRIMARY EXAMINER